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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/088,894 | 07/16/2002 | Kent Stalhandske | 20459/0351 | 8950 |

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EXAMINER

JOHNSON, STEPHEN

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|--------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/088,894 | STALHANDSKE ET AL. |
| Examiner | Art Unit | |
| Steph n M. Johnson | 3641 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 July 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 July 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) Other: _____

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1. The drawings are objected to because boxes 2, 2a, 13, and 7 lack descriptive labels. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because numerical indicator 24 (see page 12, last line) is not illustrated. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The written specification is objected to because it lacks section headings (i.e. "Background of the Invention"; "Brief Summary of the Invention"; "Brief Description of the Drawings"; "Detailed Description of the Invention"; and "Abstract of the Disclosure").
4. The disclosure is objected to because of the following informalities: On page 6, line 27, the number "3" should be (2).

Appropriate correction is required.

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
6. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, what structural elements are intended to correspond to the claimed "artillery pieces"? In claim 1, lines 2-3, the phrase "the components for loading" lacks an antecedent. In claim 1, lines 4-5, what component is intended to correspond to the claimed

“the component with which the piece is to be loaded”? In claim 1, lines 6-7, what component is intended to correspond to the claimed “the respective component”? In claim 1, line 8, the phrase “the final distance” lacks an antecedent. Further, what distance is intended to be included in the phrase “the final distance”? In claim 1, line 9, what item or element is intended to correspond to the term “its”? In claim 1, line 10, use of the phrase “characterized in that” makes the claim indefinite because claim structure should be claimed in terms of what structure or method is intended and not some characterization thereof. Further, such language makes the claims indefinite as to whether they are intended to be open-ended (e.g. comprising, including) or close-ended (e.g. consisting of) in nature. Claims 2-21 are indefinite for like reasons.

In claim 2, line 2, the phrase “the intended component” lacks an antecedent. In claim 2, line 2, what structural item is intended to correspond to the claimed “the intended component”? In claim 2, lines 3-4, how is the term “an electromechanically generated first energy supply” intended to correspond to the previously claimed [electromechanically generated energy supply] (see claim 1)? In claim 2, line 5, the phrase “the loading direction” lacks an antecedent. In claim 2, lines 6-7, the phrase “the same direction” lacks an antecedent. In claim 2, lines 6-7, what direction is intended by the phrase “the same direction”? In claim 4, lines 2-3, the phrase “the electromechanically generated first energy supply” lacks complete agreement with its antecedent. In claim 4, line 4, the phrase “the energy accumulator” lacks an antecedent. In claim 4, line 5, use of the phrase “the like” makes the claim indefinite as to what structural items are or are not intended to be included in such terminology.

In claim 5, line 3, use of the phrase “such as a shell” makes the claim indefinite as to what structure is intended to be included or excluded by such terminology. In claim 5, line 6,

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what the term “its” is intended to reference is indefinite. In claim 5, line 7, the phrase “the energy generator” lacks an antecedent. In claim 5, line 8, how is the term “an electric motor” intended to correspond to the previously claimed (electric motor) (see claim 1)? In claim 5, lines 9 and 10, the phrases “the desired linear acceleration” and “the desired ramming velocity” lack complete agreement with their antecedents.

In claim 6, line 2, what the word “it” is intended to reference is indefinite. In claim 6, lines 2-3 and 8, how is the term “electromechanical system” intended to relate to the previously claimed ‘electromechanically generated energy supply’? In claim 6, line 4, the phrase “the loading direction” lacks an antecedent. In claim 6, line 5, what the term “it” is intended to reference is indefinite. In claim 6, line 7, what direction the phrase “the same direction” is intended to include is indefinite. In claim 6, line 7, the phrase “the same direction” lacks an antecedent. In claim 6, lines 11-12, the phrase “the second” should be claimed as (the second energy supply) if this is the intended antecedent. In claim 6, lines 12-13, use of the phrase “the interacting energy supplies” lacks an antecedent as well as clearly identifying what energy supplies are intended. In claim 7, lines 3-4, how the phrase “a geared-down electric motor” is intended to relate to the previously claimed ‘an electric motor’ (see claim 1)? In claim 7, lines 6-7, how is the term “a linear accelerating movement” intended to relate to the previously claimed ‘rectilinear acceleration’ (see claim 1)?

In claim 8, lines 1-2, the phrase “said mechanical means” lacks an antecedent. In claim 8, lines 3-4, how is the phrase “a linear accelerating movement” intended to relate to the previously claimed ‘rectilinear acceleration’ (see claim 1)? In claim 8, lines 5-7, the phrases “the one hand” and “the other hand” lack antecedents. In claim 8, line 6, the phrase “the output shaft” lacks an

antecedent. In claim 8, line 10, the phrase “the same spindle” lacks an antecedent. In claim 8, lines 11-12, what chain wheels are intended by the phrase “these two last-mentioned chain wheels”? In claim 8, line 12, the phrase “the same direction” lacks an antecedent. In claim 9, lines 1-2, the phrase “the energy accumulator” lacks an antecedent. In claim 9, line 3, the phrase “the two feed chains” lacks an antecedent. In claim 9, lines 5-7, the phrase “the shell rammer” lacks an antecedent. In claim 9, line 8, the phrase “the energy accumulator” lacks an antecedent. In claim 10, line 1, the phrase “in that is comprises” is grammatically incorrect. In claim 10, line 3, how is the term “an electric motor” intended to relate to the previously claimed ‘electric motor’ (see claim 1)? In claim 10, lines 6-7, the phrases “the output shaft” and “the outer end” lack antecedents. In claim 10, line 7, what structure is intended to correspond to the claimed “the latter”?

In claim 11, lines 3, 5, and 11, the phrases “the output shaft” and “the shaft” lack antecedents. In claim 11, line 6, the phrase “the starting position” lacks an antecedent. In claim 11, line 7, what the term “it” is intended to reference is indefinite. In claim 11, lines 8-9, what angle is intended by the term “a certain angle”? In claim 11, lines 9-10, the phrases “the connecting line” and “the fixed fastening point” lack antecedents. In claim 11, line 14, use of the phrase “relatively small prestressing” makes the claim indefinite as to the amount of prestressing intended. In claim 11, lines 15-16, the phrase “the braking energy” lacks an antecedent. In claim 12, what the term “it” is intended to reference is indefinite. In claim 12, the phrase “the energy accumulator” lacks an antecedent. In claim 13, line 3, what structure is intended to correspond to the claimed “the arrangement”? In claim 13, lines 3 and 6, the phrases “the energy” and “the charging” lack antecedents. In claim 13, lines 5-6, the phrase “the energy accumulator” lacks an

antecedent. In claim 13, line 6, the phrase “the same” is indefinite as to what it is intended to reference.

In claim 14, line 6, the phrase “the shell rammer” lacks complete agreement with its antecedent. In claim 14, lines 8-9, what structure is intended to correspond to the claimed “the rest of the system”. In claim 14, line 9, the phrase “the system” lacks an antecedent as well as being indefinite as to what it is intended to reference. In claim 14, line 9, what the term “the latter” is intended to reference is indefinite. In claim 14, lines 10-11, the phrase “the drive shaft” lacks an antecedent. In claim 14, line 11, how is the term “pinions” intended to relate to the previously claimed “pinion” (see claim 14, line 4)? Are these intended to be the same pinions or different pinions? In claim 15, line 5, the phrase “the output shaft” lacks an antecedent. In claim 15, line 9, what the term “its” is intended to reference is indefinite. In claim 15, lines 10 and 14, the phrases “the body” and “the fixed body” lack antecedents.

In claim 16, the phrases “the release” and “the energy accumulator” lack antecedents. In claim 16, what the term “it” is intended to reference is indefinite. In claim 17, the phrases “the triggering”, “the energy accumulators”, and “the time” lack antecedents. In claim 17, what the term “it” is intended to reference is indefinite. In claim 18, use of the phrase “an earlier stage” makes the claim indefinite as to whose early stage is intended. In claims 19 and 20, use of the term “the like” makes the claim indefinite as to what structure is or is not intended to be included in such terminology.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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8. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the embodiment illustrated in fig. 8, it is not understood as to how the motion of rack 28 is used to displace feed chain 34 and ultimately move shell rammer 6d to load the shells or projectiles.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated (to the degree that the claim limitations can be determined) by Cotter et al..

Cotter et al. disclose a method for loading an artillery piece comprising :

a) accelerating a shell or powder charge; page 2, col. 2, lines 49-55

b) an electromagnetically generated energy 5

supply that is an electric motor; and

c) converting to rectilinear acceleration. see fig. 2

11. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated (to the degree that the claim limitations can be determined) by Sullivan et al..

Sullivan et al. disclose a method for loading an artillery piece comprising :

a) accelerating a shell or powder charge; col. 5, lines 13-37

b) an electromagnetically generated energy 96

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supply that is an electric motor; and

c) converting to rectilinear acceleration. see fig. 5

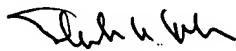
12. Claims 2-4 and 6-20 are too indefinite in their current form to make a determination regarding patentable subject matter.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Golden et al., Sawyer, Nordmann (421), Christiansson, DeHaven et al., and Nordmann (350) disclose other state of the art loading mechanisms.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 703-306-4158. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.



STEPHEN M. JOHNSON
PRIMARY EXAMINER

SMJ
January 31, 2003

Stephen M. Johnson
Primary Examiner
Art Unit 3641